

5.2 Equivalent Expressions

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"Like terms" - terms that have the same variables and exponents
- only difference is the coefficient

Examples

1. Give coefficient, variable(s) and exponents of variable for each:

	term	coeff	variable(s)	exponent(s)
a)	$3c^2$	3	c	2
b)	$-x$	-1	x	1
c)	y	1	y	1
d)	$7xz^2$	7	x, z	2, 1

2. Which are like terms?

$6t$, $\underbrace{3x}$, $6t^2$, $6xt$, $\underbrace{-8x}$

\uparrow
(b)(t)
 $6 \cdot t$

like terms

same variable = x
same exponent = 1
only the coeff is different

Give an example of like terms:

$$\underline{3xy^2}, \underline{7xy^2}$$

$$\underline{7s^2}, \underline{9s^2} \checkmark$$

$$2x^7, 11x^7 \checkmark$$

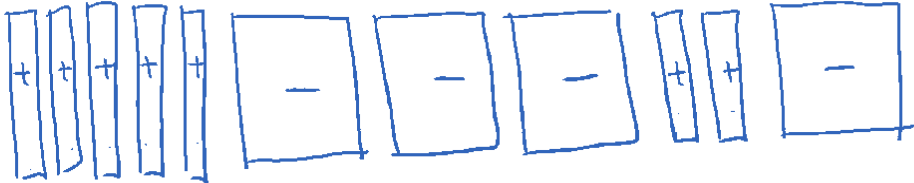
$$4a^3, 7a^3 \checkmark$$

$$4xy^3, 9xy^3 \checkmark$$

$$5yx^3, -66yx^3 \checkmark$$

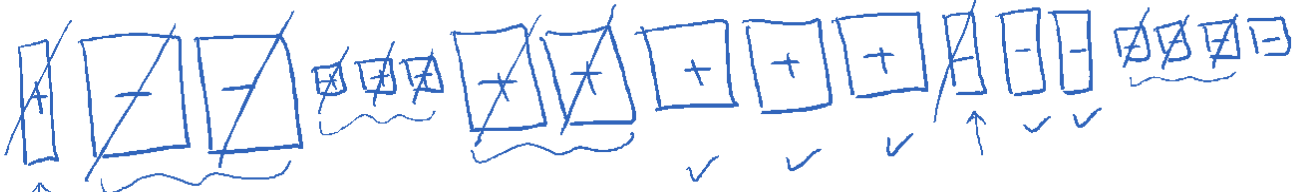
3. Combine/collect "like terms" using
a) model (algebra tiles) b) symbols (variables)

i) $5x - 3x^2 + 2x - x^2$

a)  $= -4x^2 + 7x$

b) $\underbrace{5x}_{\text{|||||}} - \underbrace{3x^2}_{\text{|||||}} + \underbrace{2x}_{\text{|||||}} - \underbrace{x^2}_{\text{|||||}} = -4x^2 + 7x$

ii) $k - 2k^2 + 3 + 5k^2 - 3k - 4$

a)  $= 3k^2 - 2k - 1$

b) $\underbrace{k}_{\text{|||||}} - \underbrace{2k^2}_{\text{|||||}} + \underbrace{3}_{\text{|||||}} + \underbrace{5k^2}_{\text{|||||}} - \underbrace{3k}_{\text{|||||}} - \underbrace{4}_{\text{|||||}} = 3k^2 - 2k - 1$

Practice pg 187 #5-23